

## **REMARKS**

Claims 101-105, 107-120 and 123 are pending in this Application. By this Amendment, claims 101-105, 107, 108, 110, 113, 115 and 123 are amended and claim 106 is canceled. No new matter is added.

### **I. Interview**

The courtesies extended to Applicants' representative by Examiner Lin at the interview held December 5, 2006, are appreciated. The summary of the interview is incorporated into the remarks below and constitute Applicants' record of the interview.

### **II. Information Disclosure Statement**

The Office Action fails to consider several references submitted in the April 6, 2006 and the August 2, 2006 Information Disclosure Statements. It appears as though the Examiner has crossed off foreign patent documents that have corresponding U.S. references. For example, as indicated in the April 6, 2006 Information Disclosure statement, reference 1 (U.S. Patent No. 5,247,190) corresponds to reference 11 (JP A 04-300382). The identification of English-language counterparts in the April 6 and August 2 Information Disclosure Statements are brief statements of relevance in accordance with 37 C.F.R. §1.98. Applicants respectfully request consideration of the foreign references that have not yet been considered, based on their corresponding English-language counterparts.

### **III. Rejections Under 35 U.S.C. §112**

The Office Action rejects claims 101-104, 106, and 110-115 under 35 U.S.C. §112, second paragraph for failing to particularly point out and distinctly claim the subject matter of the invention. Specifically, the Office Action asserts that the phrases "enhancing a repellency" and "enhancing a lyophilicity" are indefinite. Claims 101-104, 106, and 110-115 have been amended to obviate the objection. Thus, withdrawal of the objection is respectfully requested.

The Office Action also rejects claims 101-104, 106, 110-115 and 123 under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. Claims 101-104, 106, 110-113 and 123 have been amended to obviate the rejection. Claims 114 and 115 depend from claim 113. Thus, withdrawal of the objection is respectfully requested.

**IV. Rejections Under 35 U.S.C. §102**

The Office Action rejects claims 101-108, 110-111 and 113-115 under 35 U.S.C. §102(b) as being anticipated by JP 08-203439 (Matsunaga). This rejection is respectfully traversed.

**A. Claims 101-102**

Amended independent claim 101 recites "enhancing a liquid repellency at a surface of the solid insulating layer, while the solid insulating layer is in a solid state." This feature is not taught or suggested by Matsunaga.

The Office Action acknowledges that Matsunaga does not explicitly teach that "a repellency at the surface of the insulating layer is enhanced." The Office Action asserts that the UV radiation used to cure the ink necessarily enhances the repellency of the insulating layer because the cured ink becomes a solid and at least repels the ink. As clarified by the Examiner during the interview, the Examiner believes that the repellency of the insulating layer is enhanced because the liquid insulating layer has a lower repellency to liquid before it is cured by UV radiation into the solid insulating layer, as a solid is more liquid repellant than a liquid.

However, Matsunaga does not teach or suggest the claimed "enhancing a liquid repellency at a surface of the *solid* insulating layer" (emphasis added). As indicated in the Office Action and the personal interview, Matsunaga may enhance a liquid repellency of the insulating layer *as the layer turns from a liquid into a solid*. Thus, withdrawal of the rejection

of independent claim 101, and claim 102 which depends on claim 101, is respectfully requested.

**B. Claims 103 and 104**

Amended independent claim 103 recites "enhancing a liquid repellency at a surface of the insulating layer *after patterning* the insulating layer so as to expose the part of the pixel electrodes" (emphasis added). This feature is not taught or suggested by Matsunaga.

In Matsunaga UV curing type ink 22a is exposed to light. After the exposure is completed, a developing process for dissolving the uncured acrylic resin is performed, exposing electrode 20. See Figs. 4A-4C. Thus, even if liquid repellency is enhanced at the surface of the insulating layer when the liquid insulating layer becomes a solid, as alleged in the Office Action, this "enhancing" appears before patterning. Thus, withdrawal of the rejection of independent claim 103, and claim 104 which depends on claim 103, is respectfully requested.

**C. Claim 105**

Amended claim 105, which incorporates the features of canceled claim 6, recites, in part, "enhancing a lyophilicity of the first electrode at the predetermined position relative to a lyophilicity of the insulating layer, the lyophilicity being enhanced with respect to the liquid solution."

Matsunaga does not teach "enhancing a lyophilicity of the *first electrode at the predetermined position relative to a lyophilicity of the insulating layer*, the lyophilicity being enhanced with respect to the liquid solution" (emphasis added). Thus, withdrawal of the rejection of claim 105 is respectfully requested. Further, claims 107-109, which depend from claim 105 are patentable at least for their dependence on an allowable base claim.

**D. Claims 106, 110, 113-114**

Claim 106 is hereby canceled. Amended independent claim 110 recites "enhancing a lyophilicity of *the first electrode* relative to a lyophilicity of the insulating layer, the lyophilicity being enhanced with respect to a liquid solution that includes an organic semiconductor material and solvent" (emphasis added). As discussed above with respect to claim 105, this feature is neither taught nor suggested by Matsunaga. Thus, withdrawal of the rejection is respectfully requested.

Claim 113 recites "enhancing a lyophilicity at the predetermined position relative to a lyophilicity at a peripheral region around the predetermined position, the lyophilicity being enhanced with respect to a liquid solution that includes an organic semiconductor material and solvent."

The Office Action alleges that Matsunaga teaches that UV light is applied to the display cells in order to cure the applied fluorescent ink, and that this must necessarily enhance the lyophilicity of the display cells. The Office Action relies on Applicants' claim 114 in support of this assertion, because claim 114 says that "enhancing a lyophilicity... is performed by an ultraviolet ray irradiation."

However, the Office Action misinterprets claim 114. Claim 114 merely refers to the "lyophilicity at the predetermined position *relative* to a lyophilicity at a peripheral region around the predetermined position is performed by an ultraviolet ray irradiation." As the peripheral region is UV irradiated, making it more liquid repellent, this results in the relative lyophilicity of the peripheral region being greater than the lyophilicity of the predetermined position. Therefore, withdrawal of the rejection is respectfully requested.

Additionally, it is improper for the Office Action to assert that Matsunaga inherently teaches or suggest enhancing lyophilicity of the predetermined position. To establish inherency, the Examiner must provide evidence or technical reasoning that makes it clear that

the missing descriptive matter "is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art." Inherency may not be established by "probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *See* MPEP §2112; *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999). The Examiner must provide a basis in fact and/or technical reasoning to show that "the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *See* MPEP §2112. Thus, as the Examiner has not provided a basis in fact and/or technical reasoning, withdrawal of the rejection is respectfully requested.

#### **V. Rejections Under 35 U.S.C. §103**

The Office Action rejects claim 109 under 35 U.S.C. §103(a) over Matsunaga in view of JP 08-162019 (Iguichi), claims 112 and 123 over Matsunaga, and claim 115 over Matsunaga in view of U.S. Patent No. 5,409,777 (Kennedy). These rejections are respectfully traversed.

Claims 109, 112, and 115 are patentable at least because of their dependence on allowable base claims, as discussed above.

Amended independent Claim 123 recites the " a first liquid repellency of a side-wall of the insulating layer to a liquid or a liquid material being substantially different from a second liquid repellency of an upper surface of the insulating layer." This feature is neither taught nor suggested by Matsunaga.

The Office Action acknowledges that the Matsunaga does not explicitly teach that "the top of the insulating layer is more repellent than the side-wall." The Office Action then alleges that (1) Matsunaga teaches that the upper layer of the partition walls can be made of a different material than the lower two layers, and (2) some possible combinations of different materials would, by coincidence, have resulted in the upper layer of the partition wall being

more repellent than the lower layers of the partition wall. This assertion is in error, for at least the reasons discussed below.

First, Applicants disagree that "some combinations of the upper and underlying layers have an upper layer being more repellent...." The Office Action offers no evidence or technical reasoning to support such an assertion.

Second, even if the upper layer is more liquid resistant than the lower two layers, the "side wall" of the partition is not more liquid repellent than the upper surface of the partition. Specifically, as a side of the upper layer is also part of the "side wall" of the partition (see, e.g. corrugated surfaces 11a of Fig. 4I), the "side wall" cannot be more liquid repellent than the upper surface of the partition.

Thus, for at least these reasons, claim 123 would not have been obvious over Matsunaga. Withdrawal of the rejection is respectfully requested.

#### **VI. Double Patenting**

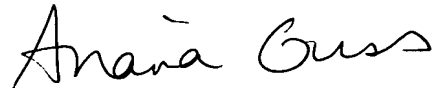
The Office Action issues a provisional rejection of claims 103-104 as being substantial duplicates of claims 101 and 102. Claim 101 does not require a particular order for completing the process steps. Claim 103 has been amended to require a particular order of at least one process step, and thus is not a substantial duplicate of claim 101. Claim 104 depends from claim 103. Thus, withdrawal of the provisional rejection is respectfully requested.

#### **VI. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 101, 102, 105, 107-120 and 123 is earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: December 28, 2006

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